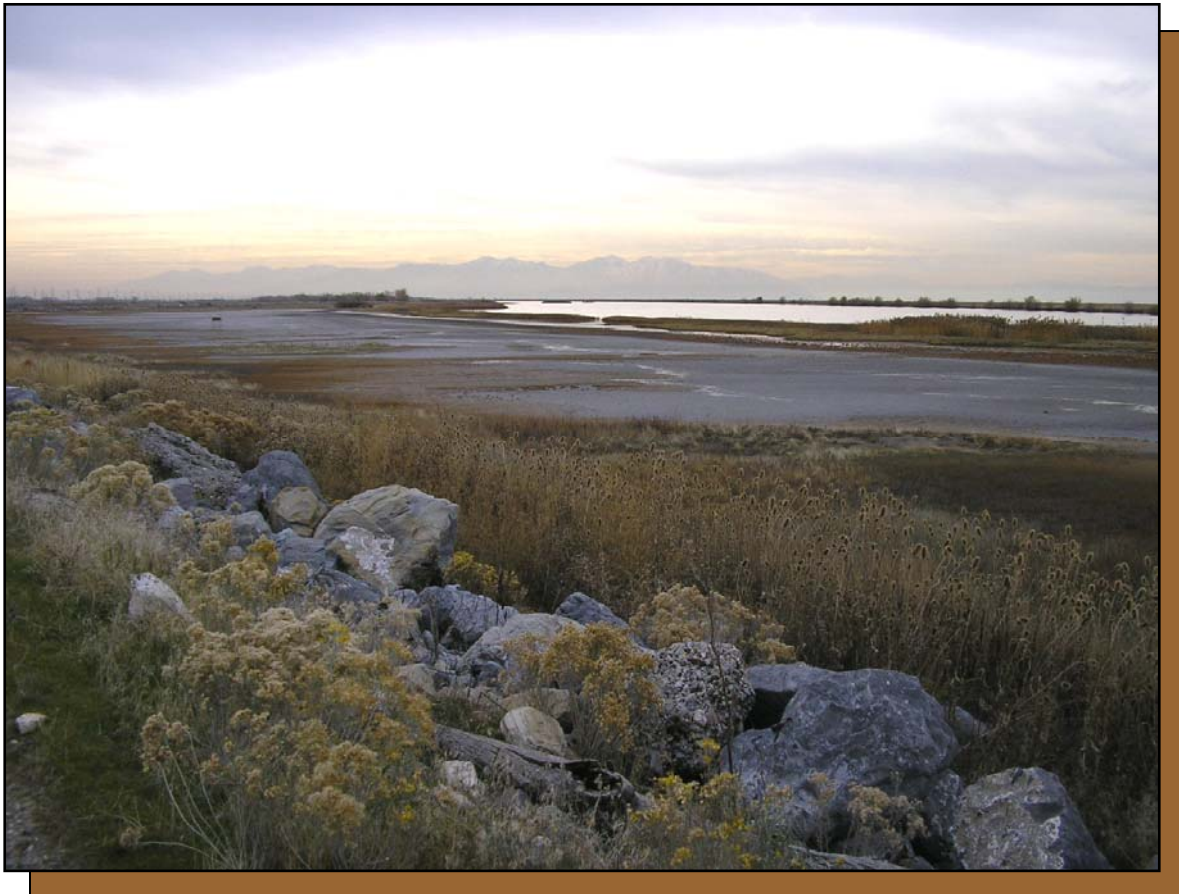


# Legacy Nature Preserve RESEARCH PROSPECTUS

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April 2008



Utah Department of Transportation  
Legacy Parkway Team

# INTRODUCTION

The Legacy Science Advisory Committee (SAC) has developed this prospectus to inform potential researchers about opportunities on Legacy Nature Preserve (LNP) and the process for obtaining approval to conduct research there. The SAC coordinates research projects to ensure that those activities are not detrimental to the LNP's mission of providing wildlife habitat.

In pursuing studies of interest to the broader scientific community, researchers can also help address the Utah Department of Transportation's (UDOT's) need for information critical to management of LNP and for planning future transportation projects statewide.

## BACKGROUND

### Legacy Parkway and Nature Preserve

The Legacy Parkway (parkway), planned for completion in fall 2008, is one of several multimodal transportation projects designed to relieve traffic congestion between Davis and Salt Lake Counties. This 14-mile, four-lane highway will provide an alternative to traveling on Interstate 15 between Salt Lake City and Farmington. Parkway design features include unique gateways to the parkway and surrounding communities, and a multiuse trail system with community and neighborhood trailheads. The LNP is a 2,225-acre wildlife preserve located between the Legacy Parkway and the Great Salt Lake. The LNP was established as environmental mitigation for the parkway project (Figure 1).

Several lawsuits were filed in opposition to the parkway shortly after the U.S. Army Corps of Engineers issued a Section 404 permit in 2001.<sup>1</sup> In 2005 an agreement was reached to settle the lawsuits outside of court. The agreement included a number of provisions such as additions to the LNP, a 55-mph speed limit, truck access limitations, parkway enhancements, quiet pavement, funding for the study of Bus Rapid Transit/Light Rail Transit in southern Davis County, and creation of the Science Advisory Committee to provide advice to UDOT on management of the LNP.

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<sup>1</sup> A Section 404 permit is issued by the Secretary of the U.S. Army through the Chief of Engineers to permit the discharge of dredged or fill material into navigable waters of the United States, which may include tributaries and adjacent wetlands.  
See: <http://www.usace.army.mil/cw/cecwo/reg/oceover.htm>



**Figure 1. Legacy Parkway and Nature Preserve project area.**

The stated mission of LNP is to “. . .provide in perpetuity quality wildlife habitats for mitigating impacts to wetlands and wildlife associated with the Legacy Parkway.” The LNP is an integral part of the Great Salt Lake ecosystem, preventing encroachment of future development and a mosaic of wetland and upland habitats that are especially important for migratory birds.

In 2007 the Federal Highway Administration selected parkway and LNP for an Environmental Excellence Award, noting that the final project design was aesthetically compatible with the local communities and provided a unique opportunity to mitigate wetlands and enhance wildlife habitat.

## **Legacy Nature Preserve Management Objectives**

Overarching guidance for the LNP comes from the final Section 404 Permit, released January 20, 2006 (Permit Application No. 200350493). The permit charges UDOT with providing for the ongoing and future management of the LNP. Among the permit requirements is implementation of the Adaptive Management Plan (AMP) completed by a Collaborative Design Team (CDT) representing agencies, environmental interests, and other managers. The AMP established the mission statement and management objectives for the preserve and called for the development of more specific resource management plans for habitat, water resources, and public access and education. These management plans were completed in February 2007 under the direction of the CDT. The AMP and accompanying resource management plans are available from the Legacy Parkway and Preserve website (<http://www.legacypreserve.utah.gov/>). These plans provide prospective researchers with details regarding management objectives for the LNP.

## **Science Advisory Committee**

As noted earlier, the SAC was established pursuant to the terms of the Legacy Parkway Settlement Agreement between UDOT, the Federal Defendants, and the project plaintiffs. The stated purpose of the SAC is “. . . to provide advice to UDOT on the management of the Legacy Nature Preserve.” The immediate emphasis of the SAC is to recommend appropriate areas of research on the LNP, encourage appropriate research and researchers, and establish a program to review and evaluate proposed research.

It should be noted that refining and tracking mitigation success criteria for the Legacy Parkway 404 Permit is not a function of the SAC, but it is

appropriate for the SAC to encourage and facilitate research efforts that address general mitigation procedures, processes, and reporting.

## RESEARCH FRAMEWORK

The Legacy Parkway Team and SAC have defined research priorities for the LNP. These priorities serve as a basis for both encouraging appropriate research on the LNP and evaluating and approving proposed research.

The LNP research framework has been structured to address two broad concepts: UDOT's acknowledged information gaps relative to the parkway project (and other comparable future projects) and general areas of broader scientific interest where the LNP would be a valuable "outdoor laboratory." Obviously, these are not necessarily independent or inclusive concepts, and the opportunity for overlap and synergism is clearly present.

Regarding UDOT-acknowledged information gaps, several problematic issues rose during the parkway environmental process for which obvious answers were not readily available. These include:

- indirect impacts to species and ecological systems from the construction and operation of a highway relative to such items as noise, light, human presence, air quality, and water quality;
- evaluation of habitat fragmentation, habitat modification, and weed invasion and control; and
- effects on natural hydrologic processes and water quality.

From a broader scientific perspective, areas of research interest might be framed in terms of issues or questions relative to the following categories:

- water – ground and surface, quantity and quality;
- wildlife – monitoring, population dynamics and success, predator control;
- habitat – quality, monitoring, value, success processes;
- restoration ecology – methodologies, evaluation, success;
- mitigation – developing, monitoring, reporting; and
- sociological – public access, education.

Obviously, a wide array of research topics under each category listed above can be envisioned.

## REVIEW PROCESS

Proposed research should be submitted to the SAC in accordance with the following procedure:

- Complete the Proposed Research Form available from the LNP website (see below). The overall length of the completed form should not exceed 8 pages.
- Submit completed forms to the SAC Coordinator (no set deadline).
- Review completed forms and make a decision within 60 days (SAC members).
- Inform submitters of the SAC decision (Coordinator).

The LNP Proposed Research Form requires the following:

- contact information,
- project title and research problem statement,
- brief description of research personnel and qualifications,
- brief background of the research problem (literature review),
- relevance to LNP and UDOT management objectives,
- available research funding and period of funding, and
- access needs and duration of research activity on the LNP.

## CONTACT INFORMATION

Thomas M. Twedt, Ph.D., SAC Research Coordinator  
BIO-WEST, Inc.  
1063 West 1400 North  
Logan, Utah 84321  
Phone: (435) 752-4202

Mike Perkins, Legacy Environmental Oversight Manager  
HDR, Inc.  
3995 South 700 East, Suite 100  
Salt Lake City, Utah 84107

LNP website: <http://www.legacypreserve.utah.gov/>